Work Order ID 85386

June-07-12 9:25:31 AM

85386

Item ID: D3560-044 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID:

Item Name: Arm Weldment **Stop** *NS2*

Start Date: 07/06/2012 **Start Qty:** 6.00 *6*

Required Date: 21/06/2012 **Req'd Qty:** 6.00 *6*

Reference:

Cust Item ID:

Customer:

Approvals: **Process Plan:** MLJ **Date:** 12/06/07 **Tooling:** **Date:** **Run Start** *NR1*

QC: **Date:** **SPC (Y/N):** **Date:** **Stop** *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**								
D3560	Rev D								
100		0.00							
100	BAND SAW								
Bandsaw	**Memo**	0.00	ark 12/06/15			6	0		
Jeaspa Bandsaw	Cut blanks 15.500" long								
110		0.00							
110	HAAS CNC VERTICAL MACHINING #1								
HAAS 1	**Memo**	0.00	AS 12/06/21			6	0		
HAAS CNC vertical machine #1	1- Mill as per Folio FA696 Rev: AA & Dwg D3560 Rev: D 2-C'sink 0.196" hole on manual mill as per dwg D3560 3-Deburr per dwg D3560								
120	QC2- Inspect parts off machine FAI/FAIB	0.00							
120									
QC	**Memo**	0.00	AS 12/06/21			6	0		
Quality Control									

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Work Order ID 85386

June-07-12 9:25:31 AM

85386

Item ID: D3560-044 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Arm Weldment

Start Date: 07/06/2012 **Start Qty:** 6.00 *6*

Required Date: 21/06/2012 **Req'd Qty:** 6.00 *6*

Reference:

Cust Item ID:

Customer:

Approvals: **Process Plan:** **Date:** **Tooling:** **Date:** **Run Start** *NR1*

QC: **Date:** **SPC (Y/N):** **Date:** **Stop** *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC8- Inspect parts - second check	0.00							
130			D.A 12/06/22			6	0		
QC	**Memo**	0.00							
Quality Control									
140		0.00							
140	Large Fab								
Large Fab	**Memo**	0.00				6	0		JK 12-08-30
Large Fab	1-Weld assembly as per dwg D3560 STEP: 1- clean material (buff bracket and bottom of arm with blue pad) 2- set up bracket and arm on jig 3- preheat bracket and arm with torch 4- clean before welding with brush 5- set up machine to 135 amps 6- weld across bottom and top ends 7- reheat with torch (65 deg C) 8- on one side weld from bottom to top half way 9- same for other side (half way) 10- from half way point weld the rest of the first side (ease off pedal near end) 11- same for remaining side (ease off pedal near end)								

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Work Order ID 85386

June-07-12 9:25:31 AM

85386

Item ID: D3560-044 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Arm Weldment

Start Date: 07/06/2012 **Start Qty:** 6.00 *6*

Required Date: 21/06/2012 **Req'd Qty:** 6.00 *6*

Reference:

Cust Item ID:

Customer:

Approvals: **Process Plan:** **Date:** **Tooling:** **Date:** **Run Start** *NR1*

QC: **Date:** **SPC (Y/N):** **Date:** **Stop** *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 *150* QC Quality Control	QC5- Inspect part completeness to step on W/O	0.00	DAS 16 9-89	1260131		6			
	Memo	0.00 SMB 12-8-31							
160 *160* QC Quality Control	QC9- Inspect visual per QSI004- Fusion Welds	0.00				6	0	1210830 DAS 18 9-89	
	Memo	0.00							
170 *170* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1	0.00				6x	4	1210901	
	Memo	0.00							

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Work Order ID 85386

June-07-12 9:25:31 AM

85386

Item ID: D3560-044 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Arm Weldment

Start Date: 07/06/2012 **Start Qty:** 6.00 *6* **Cust Item ID:**

Required Date: 21/06/2012 **Req'd Qty:** 6.00 *6* **Customer:**

Reference:

Approvals: **Process Plan:** ____ **Date:** ____ **Tooling:** ____ **Date:** ____ **Run Start** *NR1*

QC: ____ **Date:** ____ **SPC (Y/N):** ____ **Date:** ____ **Stop** *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 *180* QC Quality Control	QC3- Inspect Part Finish	0.00				6	0	BL	12-9-4
	Memo	0.00							
190 *190* Small Fab Small Fab	Small Fab	0.00				6x			12/09/04
	Memo 1-Press bushing in D3560 arm per dwg D3562	0.00							
200 *200* QC Quality Control	QC5- Inspect part completeness to step on W/O	0.00 SmB 12-9-4				6			DAS 16 8-53 11/09/04
	Memo	0.00							

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Work Order ID 85386

June-07-12 9:25:31 AM

85386

Item ID: D3560-044
Revision ID:
Item Name: Arm Weldment
Start Date: 07/06/2012 **Start Qty:** 6.00 *6*
Required Date: 21/06/2012 **Req'd Qty:** 6.00 *6*
Reference:

Accept *N900040100*

Setup Start *NS1*
Stop *NS2*

Cust Item ID:
Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	Identify as per dwg & Stock Location: WIP	0.00							
210									
Packaging	**Memo**	0.00				6	0		12.09.05
Packaging	*** STOCK IN STEP CELL***								
220	QC21- Final Inspection - Work Order Release	0.00							12/9/11
220									
QC	**Memo**	0.00							
Quality Control									12-09-06

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Picklist Print

June-07-12 9:25:34 AM

Work Order ID: 85386

85386

Parent Item: D3560-044

D3560-044

Parent Item Name: Arm Weldment

Start Date: 07/06/2012 **Required Date:** 21/06/2012

Start Qty: 6.00 **Required Qty:** 6.00

Comments:

IPP Rev:A New Issue 07.05.24 EC
IPP Rev B ECN 987 07.10.09 EC verified by DD
IPP Rev:C ECN1048 07-12-18 DD veriffied by: EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2808		Manufactured	No			100	Each	8.0000	1	6			
D2808									**				
Bushing													

Location	Loc Qty	Loc Code
GA	8	
32896	2	
79688	6	

12/09/04
B82018
GA

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6B0.500X05.00 0		Purchased	No			140	f	66.2534	1.295	8.178947			
M6061T6B0.500X05.000									**				
6061-T6 Bar .500 x 5.00													

Location	Loc Qty	Loc Code
MAT001	1.16	
119346	1.16	
MAT004	65.0934	
120243	0.2	
120421	2.5934	
120866	0.3	
121040	14	
121070	12	
121282	36	

8.2 mk 12/06/15

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Picklist Print

June-07-12 9:25:35 AM

Work Order ID: 85386

85386

Parent Item: D3560-044

D3560-044

Parent Item Name: Arm Weldment

Start Date: 07/06/2012 **Required Date:** 21/06/2012

Start Qty: 6.00 **Required Qty:** 6.00

D3592-1	Manufactured	No	190	Each	30.0000	1	6	12·08·30

D3592-1

Plate

**

Location	Loc Qty	Loc Code	
WA	28		
80379	28		6
WA002	2		
47015	2		

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	
Description:	Part Number:	
Inspection Dwg: Rev:		Page 1 of 1

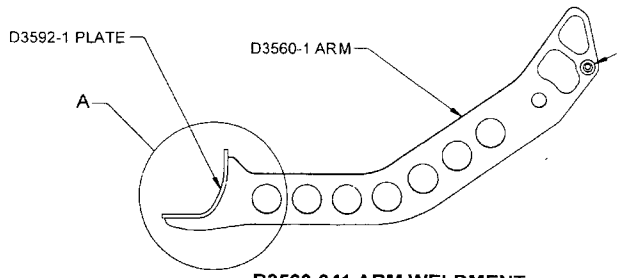
FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø .507	+.000/-.001	.507	✓		SL02	~~Mic~~ Mic
Ø .196	+.005/-.001	.197	✓		SL08	Vern
Ø 1.000	+.010/-.001	1.005	✓		↓	
Ø .900	+.010/-.001	.899	✓			
.500	+/- .010	.497	✓			
.250	+/- .010	.2515	✓			
.275	+/- .010	.277	✓			
.188	+/- .010	.190	✓			
1.750	+/- .010	1.751	✓			
1.702	+/- .010	1.705	✓			
.250 deep	+/- .010	.255	✓		✓	
Ø .385 X100°	+/- .010 X .5°	.390 X100°	✓			

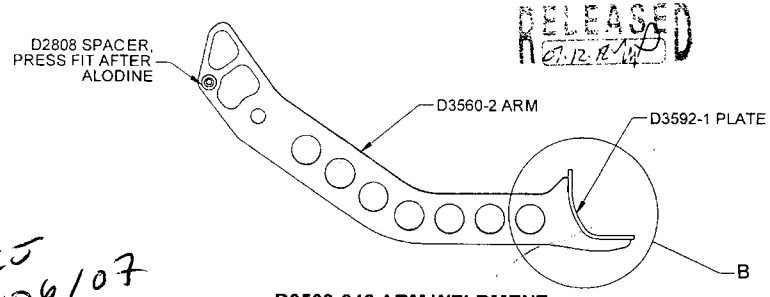
Measured by:		Audited by:		Preliminary Approval:	
Date:	12/06/21	Date:	12/06/22	Date:	

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

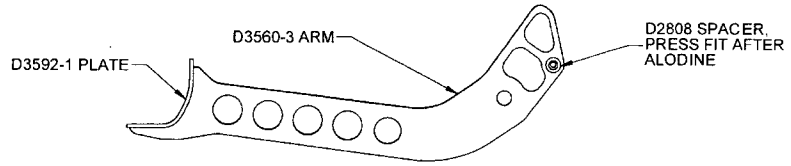
10.04.15



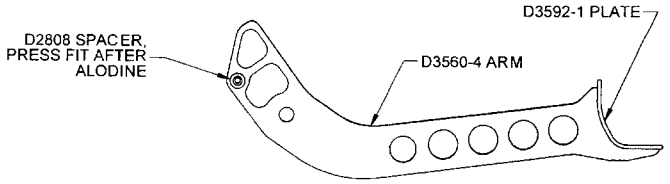
D3560-041 ARM WELDMENT



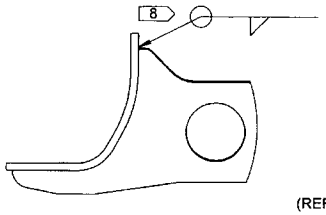
D3560-042 ARM WELDMENT



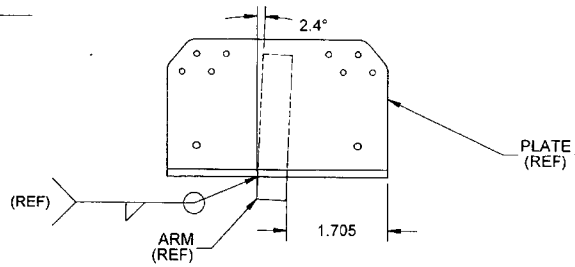
D3560-043 ARM WELDMENT

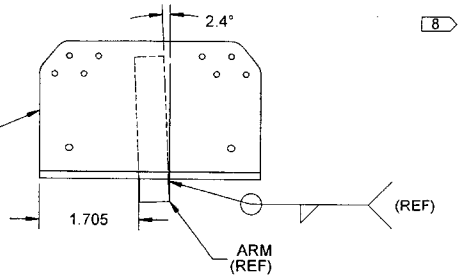


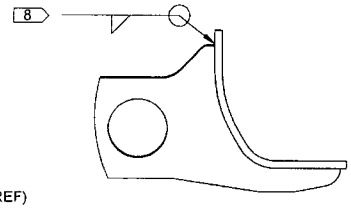
D3560-044 ARM WELDMENT



DETAIL A
SCALE 1 : 2







DETAIL B
SCALE 1 : 2

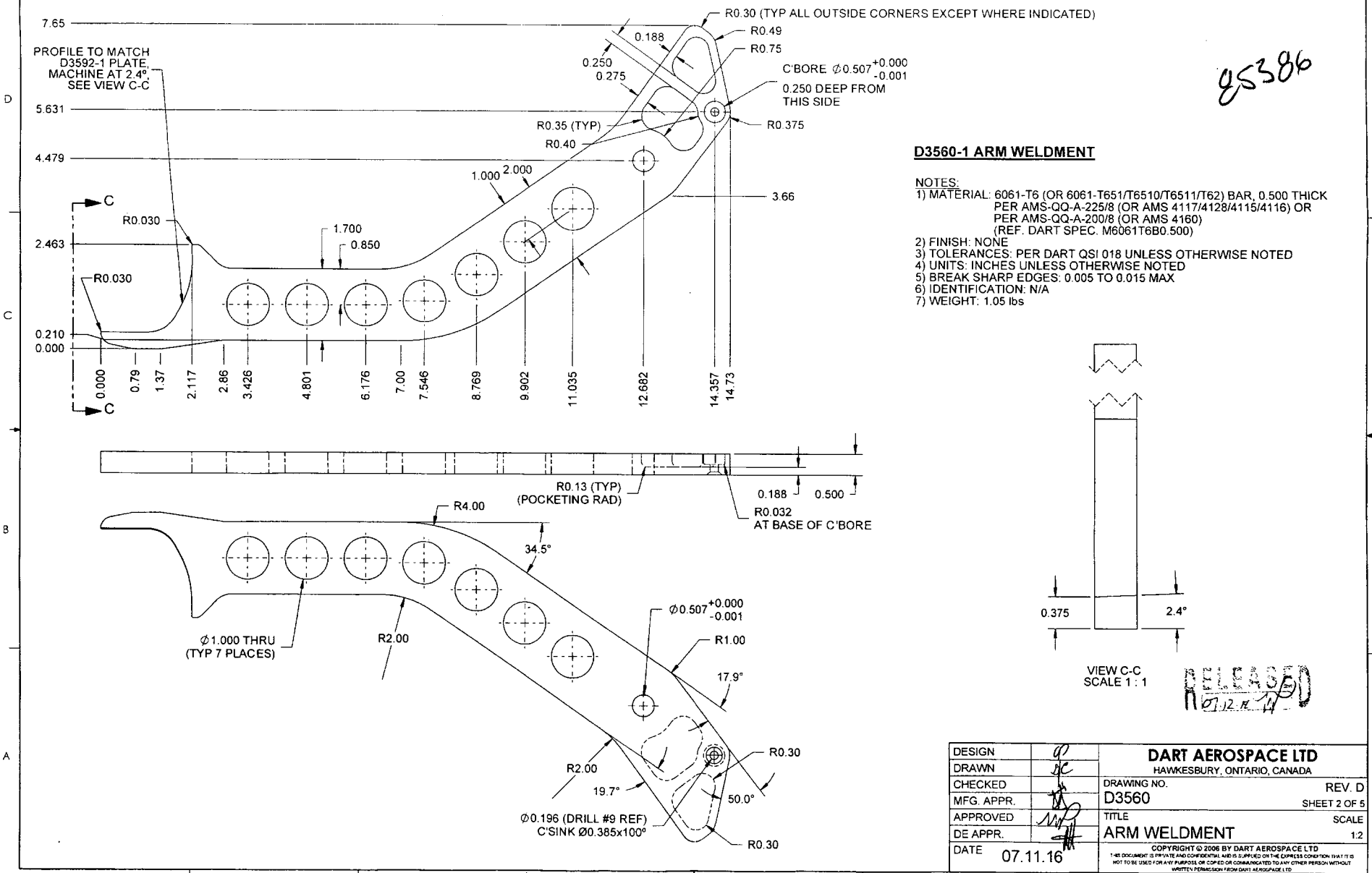
PARTS LIST

QTY -041	QTY -042	QTY -043	QTY -044	P/N	DESCRIPTION
X				D3560-041	ARM WELDMENT
	X			D3560-042	ARM WELDMENT
		X		D3560-043	ARM WELDMENT
			X	D3560-044	ARM WELDMENT
1	1	1	1	D2808	SPACER
1				D3560-1	ARM
	1			D3560-2	ARM
		1		D3560-3	ARM
			1	D3560-4	ARM
1	1	1	1	D3592-1	PLATE

NOTES:
1) MATERIAL: N/A
2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 1.23 lbs (TYP)
8) WELDING: PER DART QSI 004

REV.	DESCRIPTION	BY	DATE
D	ADD D2808 PRESS FIT NOTE; REDRAWN IN SOLIDWORKS	DC	07.11.16
C	REMOVE POWDER COAT	CP	07.06.19
B	REDESIGN AS WELDMENT, ADD POCKETS	CP	07.01.15
A	NEW ISSUE	CP	06.09.25

DESIGN		DART AEROSPACE LTD
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED		DRAWING NO. D3560 REV. D
MFG. APPR.		SHEET 1 OF 5
APPROVED		TITLE ARM WELDMENT
DE APPR.		SCALE 1:4
DATE	07.11.16	



95386

D3560-1 ARM WELDMENT

NOTES:
1) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T62) BAR, 0.500 THICK
PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR
PER AMS-QQ-A-200/8 (OR AMS 4160)
(REF. DART SPEC. M6061T6B0.500)
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 1.05 lbs

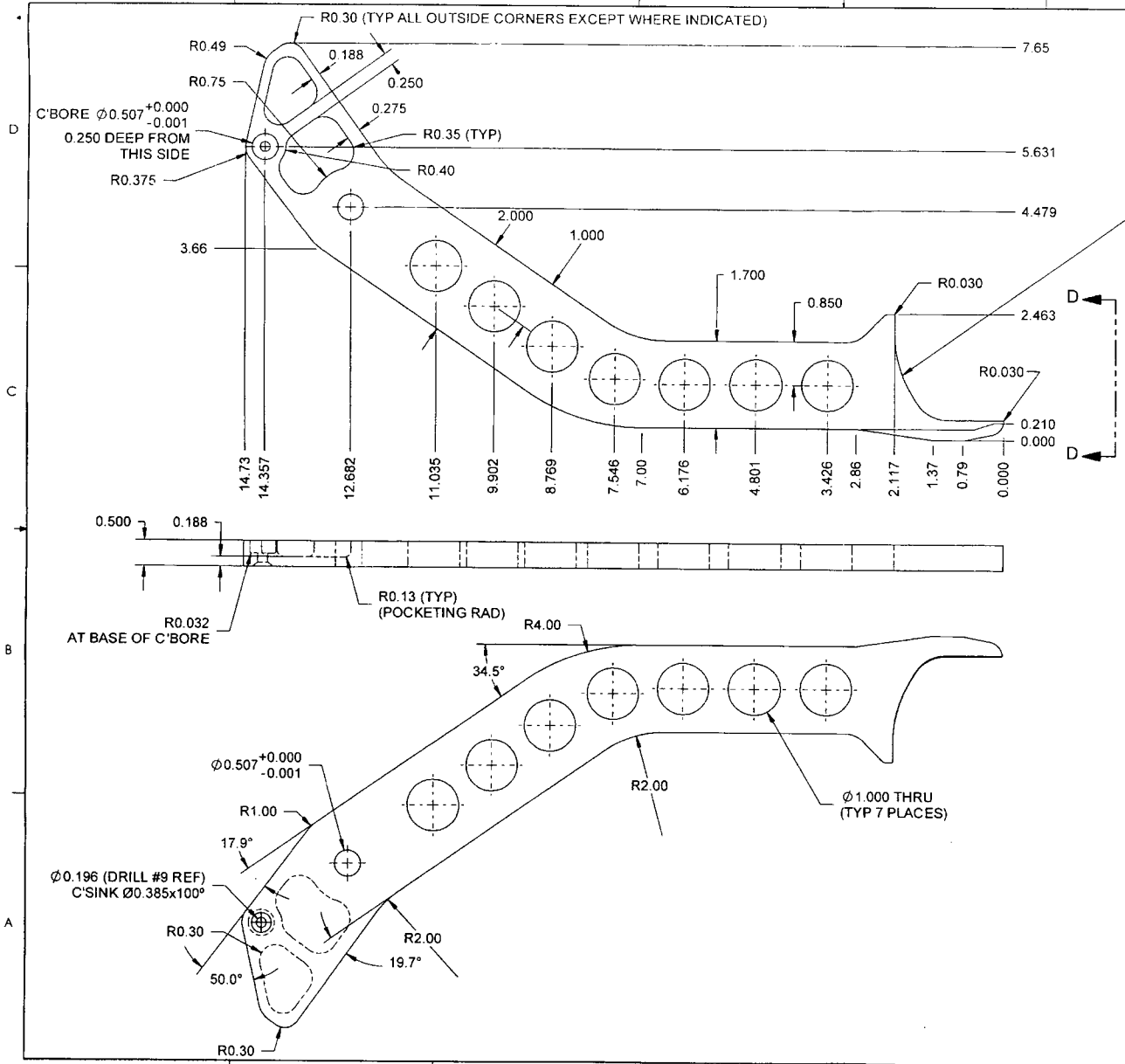
VIEW C-C
SCALE 1 : 1

RELEASED
07.12.16

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. D3560	REV. D
MFG. APPR.			SHEET 2 OF 5
APPROVED		TITLE ARM WELDMENT	SCALE 1:2
DE APPR.			
DATE 07.11.16			

85386

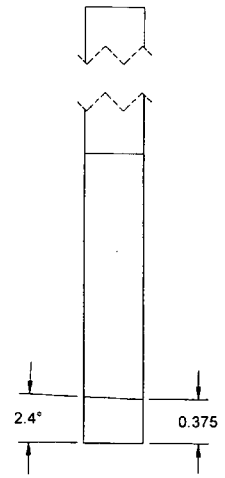
RELEASED
07-12-16 MP



PROFILE TO MATCH D3592-1 PLATE, MACHINE AT 2.4°, SEE VIEW D-D

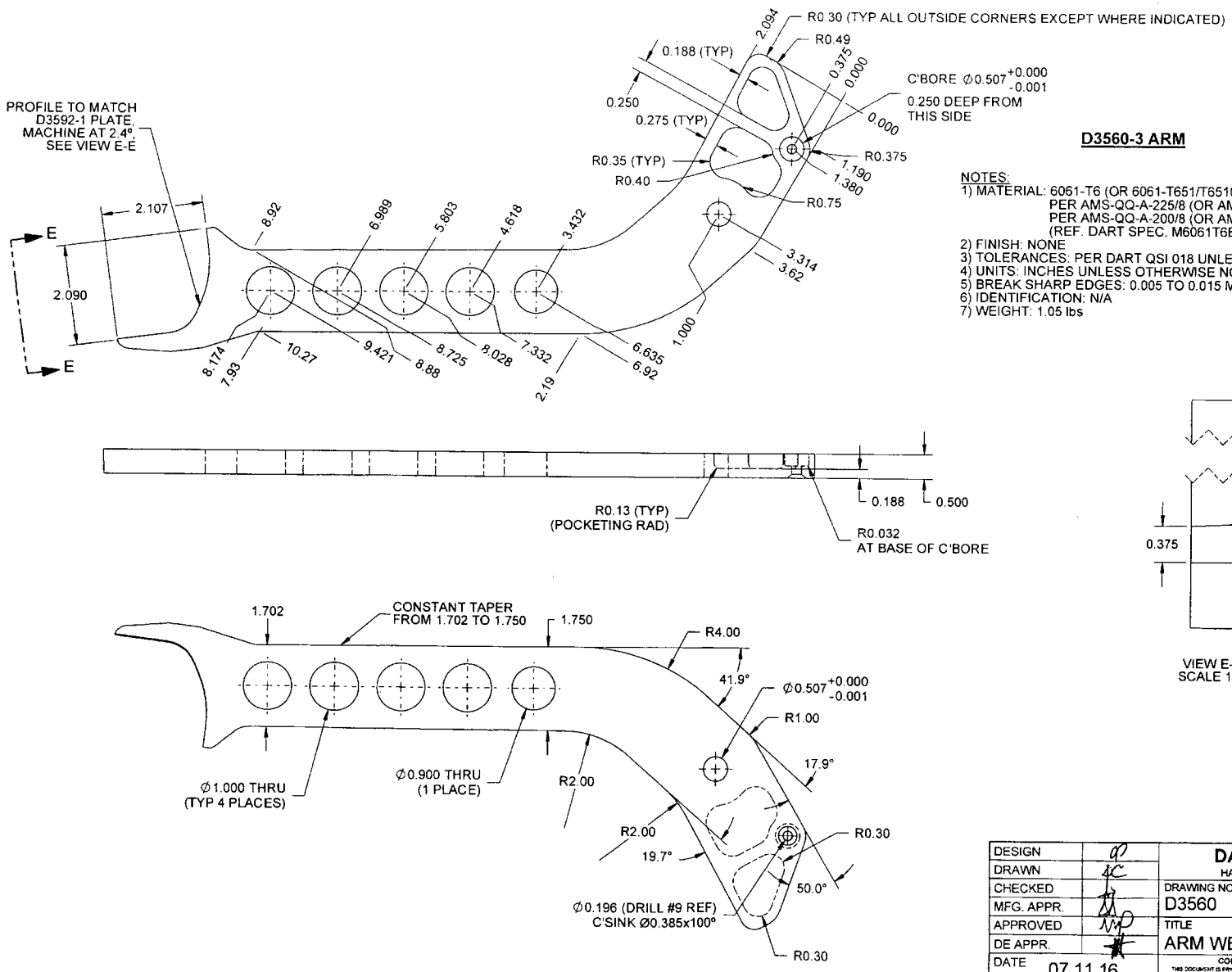
D3560-2 ARM

NOTES:
1) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T62) BAR, 0.500 THICK
PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR
PER AMS-QQ-A-200/8 (OR AMS 4160)
(REF. DART SPEC. M6061T6B0.500)
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 1.05 lbs



VIEW D-D
SCALE 1 : 1

DESIGN		**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN		DRAWING NO. D3560 REV. D
CHECKED		SHEET 3 OF 5
MFG. APPR.		TITLE ARM WELDMENT SCALE 1:2
APPROVED		
DE APPR.		
DATE 07.11.16		



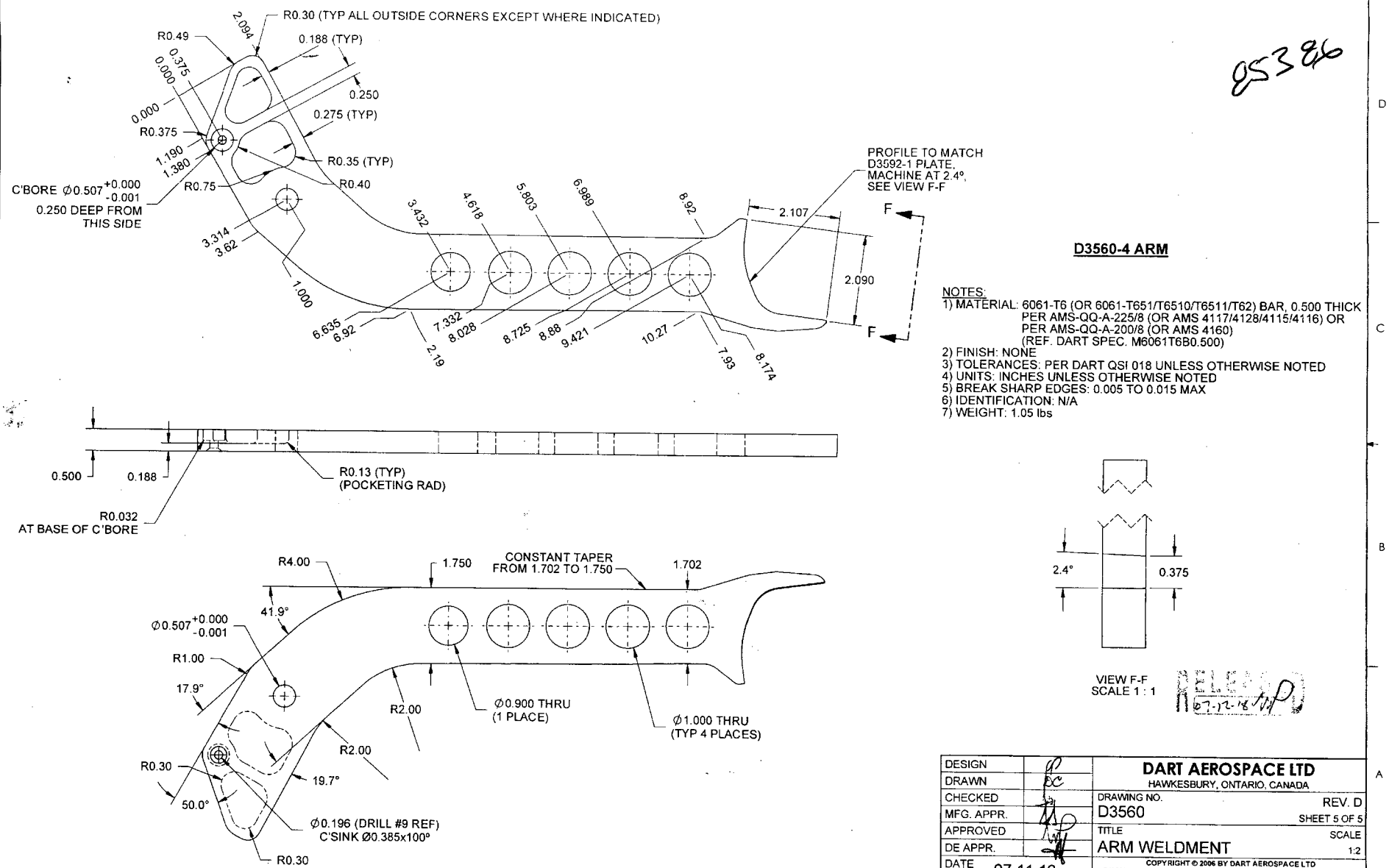
05386

D3560-3 ARM

NOTES:
1) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T62) BAR, 0.500 THICK
PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR
PER AMS-QQ-A-200/8 (OR AMS 4160)
(REF. DART SPEC. M6061T6B0.500)
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 1.05 lbs

RELEASED
07.12.16

DESIGN		**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN		DRAWING NO. D3560 REV. D
CHECKED		SHEET 4 OF 5
MFG. APPR.		TITLE ARM WELDMENT
APPROVED		SCALE 1:2
DE APPR.		
DATE 07.11.16		



05386

D3560-4 ARM

NOTES:
1) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T62) BAR, 0.500 THICK PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR PER AMS-QQ-A-200/8 (OR AMS 4160) (REF. DART SPEC. M6061T6B0.500)
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 1.05 lbs

VIEW F-F
SCALE 1 : 1

RELEASED 07-12-18 VP

DESIGN		DART AEROSPACE LTD	
DRAWN	BC	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. D3560	REV. D
MFG. APPR.			SHEET 5 OF 5
APPROVED		TITLE ARM WELDMENT	SCALE 1:2
DE APPR.			
DATE 07.11.16			